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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,555	11/12/1999	HITOSHI YASUDA	B208-1060	1785

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COWAN LIEBOWITZ & LATMAN P.C  
JOHN J TORRENTE  
1133 AVE OF THE AMERICAS  
1133 AVE OF THE AMERICAS  
NEW YORK, NY 10017

EXAMINER

WILSON, JACQUELINE B

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/02/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/439,555

Applicant(s)

YASUDA, HITOSHI

Examiner

Jacqueline Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11 and 17-25 is/are rejected.
- 7) ☒ Claim(s) 5 and 12-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 05/13/04 have been fully considered but they are not persuasive. The applicant argues that the prior art fails to teach or suggest restraining the focus lens based on the number of times that a determination of a focus state is repeatedly performed. The examiner disagrees. Nakamura teaches that focusing evaluation values are sampled 8 times (col. 5, lines 45+). This determines if focusing is approaching the in-focus point, has exceeded the in-focus point, or if the focusing is unattainable (referred to the degree of reliability of variation of the focusing evaluation values, col. 6, lines 30-65). Nakamura teaches that if the reliability of focusing evaluation is low after sampling 8 times (meaning a determination cannot be made as shown in fig. 3B), the focusing control stops the focus adjusting system from being driven. This reads on the limitation of "if said focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restrains the focus adjusting system from being driven in the one direction. Therefore, the rejections are maintained.

***Claim Rejections - 35 USC § 102***

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-11, and 17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (US 5,337,084).

Regarding Claim 1, Nakamura teaches a focus adjusting system (fig. 1, element 2), a driving device (motor 6), and a control device (1, 21) which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of time, restrains the focus adjusting system from being driven in the one direction (col. 5, lines 30+; col. 3, lines 2+; see fig. 4, steps S001-S005 and S201, discussion on col. 7, lines 20+).

Regarding Claim 2, Nakamura teaches the focus adjusting system includes a lens (see fig. 1, 2).

Regarding Claims 3, Nakamura teaches the driving device includes a motor (6).

Regarding Claim 4, Nakamura teaches if the focus adjusting system has been driven in one direction until a number of times of the determination repeatedly performed reaches the predetermined number of times (fig. 4, S004), the control device inhibits the focus adjusting system from being driven in the one direction (S201).

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Regarding Claim 6, Nakamura teaches an image pickup device (3) which received a light flux taken in through the focus adjusting system (see fig. 1), wherein the control device (1 and 21) repeatedly performs determination of a focusing state of the focusing state of the focus adjusting system on the basis of a picked up image signal from the image pickup device (signal output from 10 is used to control the focus state; see also 4 which shows the steps for focusing repeats to S001).

Regarding Claim 7, Nakamura teaches an image pickup device (3) which receives a light flux taken in through the focus adjusting system, wherein the control device repeatedly performs determination of a focusing state of the focus adjusting system on the basis of a predetermined high-frequency component of a picked-up image signal from the image pickup device (see fig. 4, and also col. 3, lines 43+).

Regarding Claim 8, Nakamura teaches an image pickup device (3) which receives a light flux taken in through the focus adjusting system, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to increase a predetermined high-frequency component of a picked-up image signal from the image pickup device (referred to as Mountain climbing S006).

Regarding Claim 9, Nakamura teaches the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state (see steps after S006).

Regarding Claim 10, Nakamura teaches that during mountain climbing, the focus state is driven within a predetermined range until the focus value has met the peak value. Once the peak value is confirmed, the device is set to be in focus. This is

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synonymous to the claimed limitation of if the focus adjusting system has been driven within a predetermined range for a predetermined period of time, the control device determines that the focus adjusting system is in an in-focus state (S007).

Regarding Claim 11, Nakamura teaches if the focus adjusting system has been driven within a predetermined range for a predetermined period of time, the control device stops driving of the focus adjusting system by the driving device (S301).

Regarding Claim 17, Nakamura teaches an image pickup apparatus (3).

Regarding Claim 18, Nakamura teaches a camera (col. 5, lines 17+).

Regarding Claim 19, Nakamura teaches an optical apparatus (referred to as lens system 2).

Claim 20 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

Claim 21 is analyzed and discussed with respect to Claim 17. (See rejection of Claim 17 above.)

Claim 22 is analyzed and discussed with respect to Claim 18. (See rejection of Claim 18 above.)

Claim 23 is analyzed and discussed with respect to Claim 19. (See rejection of Claim 19 above.)

Claim 24 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

Claim 25 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

***Allowable Subject Matter***

3. Claims 5 and 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 5, the prior art neither teaches nor fairly suggests a focus adjusting system, a driving device, and a control device which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, an, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of time, restrains the focus adjusting system from being driven in the one direction, as claimed in Claim 1, wherein if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, **the control device controls the driving device to drive the focus adjusting system in a direction reverse to the one direction.**

Regarding Claim 12, the prior art neither teaches nor fairly suggests a focus adjusting system, a driving device, and a control device which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, an, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of time, restrains the focus adjusting

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system from being driven in the one direction, as claimed in Claim 1, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, and wherein if the focus adjusting system has been driven beyond a predetermined range in a predetermined period of time, **the control device controls the driving device to drive the focus adjusting system at a faster speed in a direction in which the focus adjusting system has been driven.**

Regarding Claim 13, the prior art neither teaches nor fairly suggests a focus adjusting system, a driving device, and a control device which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of times, restrains the focus adjusting system from being driven in the one direction, as claimed in Claim 1, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, **and wherein the control device has a first driving mode for minutely driving the focus adjusting system and a second driving mode for driving the focus adjusting system at a high speed**, and, in the first mode, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, restrains the focus adjusting system from being driven in the one direction.



Regarding Claim 15, the prior art neither teaches nor fairly suggests a focus adjusting system, a driving device, and a control device which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of time, restrains the focus adjusting system from being driven in the one direction, as claimed in Claim 1, **and wherein the control device has a first driving mode for minutely driving the focus adjusting system and a second driving mode for driving the focus adjusting system at a high speed**, and, in the first mode, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times, restrains the focus adjusting system from being driven in the one direction.

#### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Wilson whose telephone number is (703) 308-5080. The examiner can normally be reached on 8:30am-5:00pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JBW  
07/14/04

  
AUNG MOE  
PRIMARY EXAMINER